VALENTINA STANEVA

802 9th Str., Apt. 10

Los Alamos, NM, 87544

valentina_staneva@yahoo.com

(505) 695-9384

Education

- **Pursuing a Ph.D. in Applied Math & Statistics**   Johns Hopkins University, Baltimore, MD
  Expected Graduation: 2012

  – Current Classes: Analysis, Probability, Foundations of Optimization, Shape and Geometry

- **B.S. in Mathematics with a minor in Computer Science**   Concord University, Athens, WV
  Date Awarded: 2006

  – Major GPA: 4.00   Overall GPA: 3.94

Experience

- **Mathematical Modeling and Analysis**   LANL, Los Alamos, NM
  Student Researcher   *Summer, 2005, February, 2006 - July, 2007*

  – Worked on a method for exact reconstruction of sparse data

  – Implemented fast and efficient algorithms for image segmentation

  – Developed a model for total variation regularization accounting for Poisson noise

  – Proposed various geometric measures for the analysis and regularization of curves

  – Added different algorithms to an existing software package for image processing

- **Institute for Pure and Applied Mathematics**   UCLA, Los Angeles, CA
  RIPS2004 Participant   *Summer, 2004*

  – Implemented an algorithm for panoramic image stitching

  – Developed a technique for producing high-dynamic range images from several exposures

  – Delivered software and a technical report to the industrial sponsors

- **Interdisciplinary Center for Applied Mathematics**   Virginia Tech, Blacksburg, VA
  Research Assistant   *Summer, 2003*

  – Developed mathematical models for dynamical systems, such as spread of SARS disease

  – Analyzed the data and verified for the stability of the systems

  – Solved the mathematical models using MATLAB

- **Computer Science/Math Department**   Concord University, Athens,WV
  Departmental Assistant   *Jan., 2002 - May, 2005*

  – Tutored all level mathematics and programming classes

  – Graded student homework, and recorded data

  – Monitored computer science labs and department classes

Computer and Language Skills

- C++, MATLAB, LaTeX

- Fluent Bulgarian and Russian, intermediate German

Activities and Awards

- Isaacs Fellowship, Johns Hopkins University, 2007 - 2011
- Joseph Marsh Scholarship of Distinction, Concord University, 2002 - 2006

- Dean's List, 2002 - 2006
- Certificate of Accomplishment, Math and Computer Science Tutor, 2004
- Computer Science/Math Club, Concord University, President, 2003

Conferences, Workshops and Summer Schools

- IPCV'07: The 2007 International Conference on Image Processing, Computer Vision and Pattern Recognition, Las Vegas NV, Jul. 25-28, 2007
- IPAM Short Course: Sparse Representations and High Dimensional Geometry : In conjunction with the AMS 2007 Von Neumann Symposium,Los Angeles Ca., May 30 - Jun. 1, 2007
- IPAM Random Shapes Workshop IV - Image Processing for Random Shapes with Applications to Brain Mapping, Geophysics and Astrophysics, Los Angeles Ca.,Aug. 20-25, 2007
- CSU/LANL Workshop on Data Driven Modeling, Fort Collins Co., Sep. 28, 2006
- DDMA Workshop, Ouray Co., July 30 - Aug. 13, 2006
- IPAM Graduate Summer School on Intelligent Extraction of Information from High-Dimensional Data and Graphs, Los Angeles Ca., Summer 2005

Publications, Technical Reports, and Research Highlights

- Chartrand R, Staneva V., *A fast solution to the convex unconstrained reformulation of the Chan-Vese model*, in preparation
- Chartrand R, Staneva V., *Non-convex regularization for image segmentation*, Proceedings of IPCV'07 - The 2007 International Conference on Image Processing, Computer Vision, and Pattern Recognition, Las Vegas, NV
- Chartrand R., Staneva V., *A quasi-Newton method for reconstruction of images corrupted by non-Gaussian noise*, under review of IEEE Transactions on Image Processing, 2007
- Barrow P., Kenney J., Staneva V., *Density-tuned curve regularization*, Mathematical Modeling and Analysis Research Highlights, Spring 2006
- Chong D., Kumar M., Quagraine P., Staneva V., *Panoramic image stitching and high-dynamic range imaging*, RIPS technical report, 2004